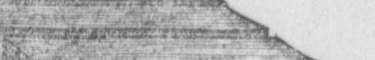


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THE LIMIT OF VISION.

It is often a matter of interest and importance to know how far one can see from a given height. The distance to the horizon must be above the earth to see an object at a given distance. The exact calculation of the figures would require the use of trigonometry, but the following practical use two very simple rules will suffice:

The distance in miles at which an object can be seen from a given height is equal to the square root of the height in feet. As the square of the distance equals the height, it follows that we must climb a hill 100 feet high to see an object 10 miles distant. It follows that we must climb a hill 100 feet high to see an object 10 miles distant. It follows that we must climb a hill 100 feet high to see an object 10 miles distant.

Usually, however, the height of the object, as well as that of the observer, must be taken into account. The distance to the horizon must be above the earth to see an object at a given distance. The exact calculation of the figures would require the use of trigonometry, but the following practical use two very simple rules will suffice:

The distance in miles at which an object can be seen from a given height is equal to the square root of the height in feet. As the square of the distance equals the height, it follows that we must climb a hill 100 feet high to see an object 10 miles distant. It follows that we must climb a hill 100 feet high to see an object 10 miles distant. It follows that we must climb a hill 100 feet high to see an object 10 miles distant.

lines to the square root of one and one-half times the distance of the observer in feet above the surface. Conversely, the distance to which an object is visible is equal to the square root of the distance in feet times 1.5. If we apply similar calculations to the distance to the horizon from a ship in the world—we obtain some interesting results. Assuming the height to be 100 feet, we find that the distance to the horizon is 40 miles. If we assume a height of 100 feet, we enjoy a circle of vision bounded by a circle 16 miles in diameter. If we assume another similar tower should ever be built, we would have a circle of vision bounded by a circle 40 miles in diameter.

1.60, and the square root of 1.6 is approximately .125, therefore the horizon is 12.5 miles distant.

As the deck of smaller vessels, like pleasure yachts, is rarely more than 10 feet above the water, it follows that the limit of vision from that point is less than four miles.

away before the rays of the electric light on their summit would be eclipsed by the intervening earth. From the summit of Mt. Everest in the Himalayas (29,000 feet high) a person could see nearly 200 miles provided the air was clear enough, which would rarely be the case.

